

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Ms. Dawn Russell on January 14, 2009.

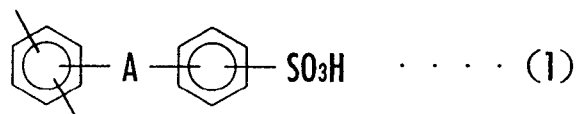
The application has been amended as follows:

### IN THE CLAIMS

Please substitute these claims for the present claims.

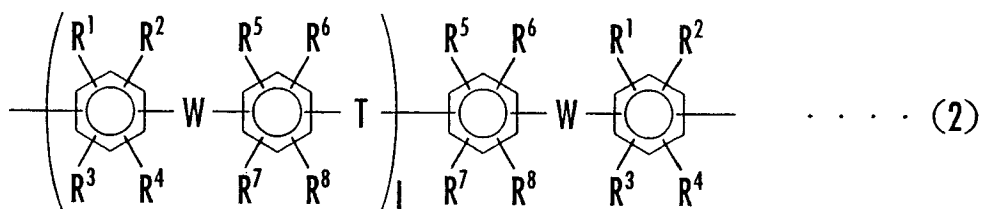
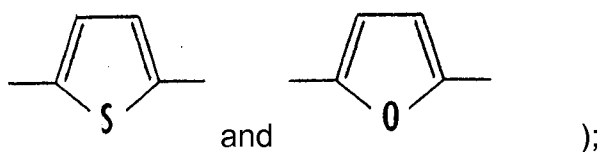
1. (Currently Amended) A fuel cell comprising a pair of electrode catalyst layers, each containing a catalyst supported by carbon particles and ion-conductive binder, and a polymer electrolyte membrane placed between the electrode catalyst layers,

wherein the polymer electrolyte membrane is formed from a sulfonated polyarylene consisting of 0.5 to 99.999% **[[100%]]** by mol of a first repeating unit represented by the general formula (1) and 0.001 **[[0]]** to 99.5% by mol of a second repeating unit represented by the general formula (2):



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(wherein, a benzene ring in general formula (1) includes its derivative, and A is a divalent organic group selected from the group consisting of -O-, -S-, -CH=CH-, -C≡C-, -CO-,



(wherein, I is an integer of from 1 to 100, -W- is a divalent electron attracting group; -T- is a divalent organic group; and R<sup>1</sup> to R<sup>8</sup> are a hydrogen atom or fluorine atom, an alkyl group, fluorine-substituted alkyl group, allyl group, aryl group or cyano group, and may be the same or different).

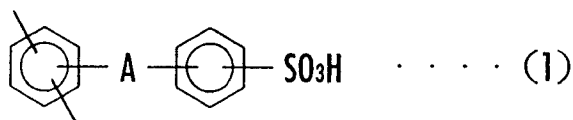
2. (Previously Presented) A fuel cell according to claim 1, wherein said electrode catalyst layer contains a noble metal catalyst at 0.1 to 1.0 mg/cm<sup>2</sup>, and said carbon particles have an average diameter of 10 to 100 nm.

3. (Cancelled)

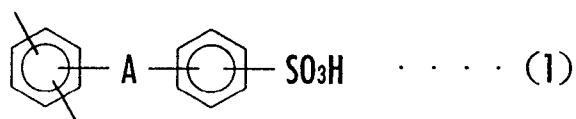
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4. (Previously Presented) A fuel cell according to claim 1, wherein said electrode catalyst layers comprise an electrode diffusion layer.

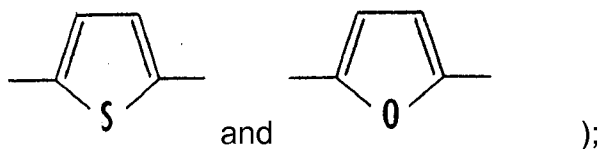
5. (Currently Amended) A polymer electrolyte fuel cell comprising an electrode structure for polymer



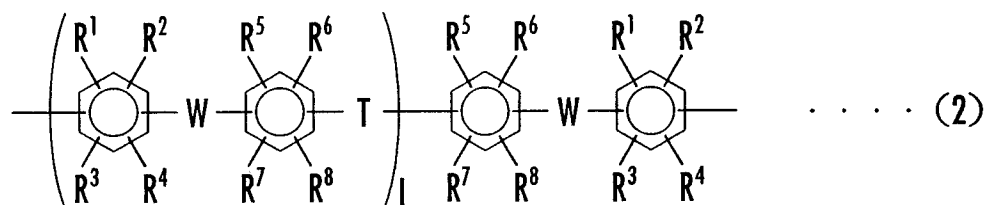
electrolyte fuel cells, which comprises a pair of electrode catalyst layers, each containing a catalyst supported by carbon particles, and a polymer electrolyte membrane placed between these electrode catalyst layers, the polymer electrolyte membrane being formed by a sulfonated polyarylene as a copolymer consisting of 0.5 to 99.999% **[[100%]]** by mol of a first repeating unit represented by the general formula (1) and 0.001 **[[0]]** to 99.5% by mol of a second repeating unit represented by the general formula (2):



(wherein, a benzene ring in general formula (1) includes its derivative, and A is a divalent organic group selected from the group consisting of -O-, -S-, -CH=CH-, -C≡C-, -CO-,

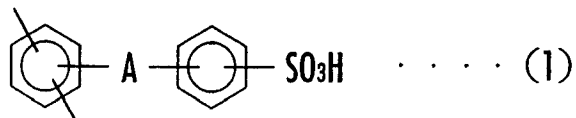


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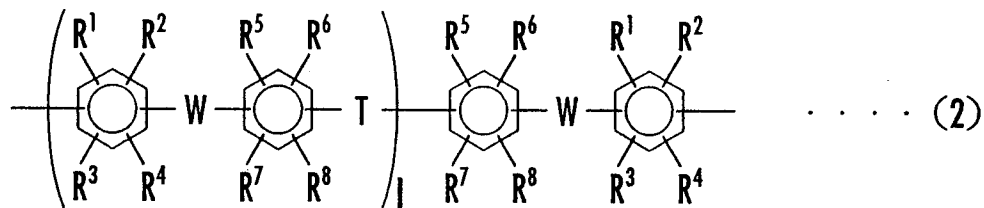
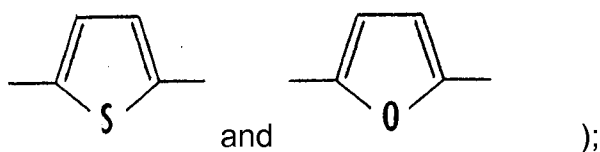
(wherein, I is an integer of from 1 to 100, -W- is a divalent electron attracting group; -T- is a divalent organic group; and R<sup>1</sup> to R<sup>8</sup> are a hydrogen atom or fluorine atom, an alkyl group, fluorine-substituted alkyl group, allyl group, aryl group or cyano group, and may be the same or different), wherein a fuel gas is supplied to one of the electrode catalyst layers and an oxidizing gas is supplied to the other electrode catalyst layer.

6. (Currently Amended) An electrical device which comprises a polymer electrolyte fuel cell comprising an electrode structure for polymer electrolyte fuel cells, which comprises a pair of electrode catalyst layers, each containing a catalyst supported by carbon particles, and a polymer electrolyte membrane placed between these electrode catalyst layers, the polymer electrolyte membrane being formed by of a sulfonated polyarylene as a copolymer consisting of 0.5 to 99.999% **[[100%]]** by mol of a first repeating unit represented by the general formula (1) and 0.001 **[[0]]** to 99.5% by mol of a second repeating unit represented by the general formula (2):



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(wherein, a benzene ring in general formula (1) includes its derivative, and A is a divalent organic group selected from the group consisting of -O-, -S-, -CH=CH-, -C≡C-, -CO-,

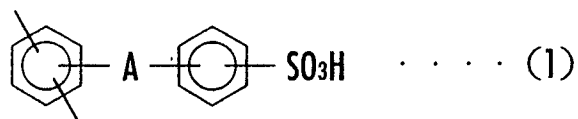


(wherein, I is an integer of from 1 to 100, -W- is a divalent electron attracting group; -T- is a divalent organic group; and R<sup>1</sup> to R<sup>8</sup> are a hydrogen atom or fluorine atom, an alkyl group, fluorine-substituted alkyl group, allyl group, aryl group or cyano group, and may be the same or different), and a fuel gas is supplied to one of the electrode catalyst layers and an oxidizing gas is supplied to the other electrode catalyst layer.

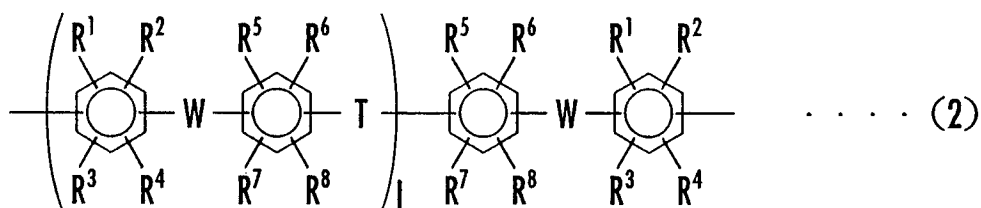
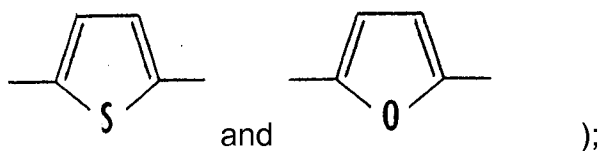
7. (Currently Amended) A transportation device which comprises a polymer electrolyte fuel cell comprising an electrode structure for polymer electrolyte fuel cells, which comprises a pair of electrode catalyst layers, each containing a catalyst supported by carbon particles, and a polymer electrolyte membrane placed between these electrode catalyst layers, the polymer electrolyte membrane being formed by a sulfonated polyarylene as a copolymer composed of 0.5 to 99.999% **[[100%]]** by mol of

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a first repeating unit represented by the general formula (1) and 0.001 **[[0]]** to 99.5% by mol of a second repeating unit represented by the general formula (2):



(wherein, a benzene ring in general formula (1) includes its derivative, and A is a divalent organic group selected from the group consisting of -O-, -S-, -CH=CH-, -C≡C-, -CO-,



(wherein, I is an integer of from 1 to 100, -W- is a divalent electron attracting group; -T- is a divalent organic group; and R<sup>1</sup> to R<sup>8</sup> are a hydrogen atom or fluorine atom, an alkyl group, fluorine-substituted alkyl group, allyl group, aryl group or cyano group, and may be the same or different), and a fuel gas is supplied to one of the electrode catalyst layers and an oxidizing gas is supplied to the other electrode catalyst layer.

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8. (Previously Presented) The fuel cell of claim 1, wherein R<sup>1</sup> to R<sup>8</sup> are an aryl group or a cyano group, and may be the same or different.
9. (Previously Presented) The polymer electrolyte fuel cell of claim 5, wherein R<sup>1</sup> to R<sup>8</sup> are an aryl group or a cyano group, and may be the same or different.
10. (Previously Presented) The electrical device of claim 6, wherein R<sup>1</sup> to R<sup>8</sup> are an aryl group or a cyano group, and may be the same or different.
11. (Previously Presented) The transportation device of claim 7, wherein R<sup>1</sup> to R<sup>8</sup> are an aryl group or a cyano group, and may be the same or different.
12. (Cancelled)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to /Laura S. Weiner/ whose telephone number is 571-272-1294. The examiner can normally be reached on M-F (6:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Laura S Weiner/  
Primary Examiner  
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January 14, 2009